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ABSTRACT

The classroom teacher needs to be able to arouse the interest of students and maintain motivation levels sufficiently high to keep students involved in learning tasks. This study describes techniques that will enable the teacher to make decisions about appropriate learning activities and student reinforcement procedures. The topic is discussed in a brief introduction, and a glossary of terms is presented. In the next section, 39 research articles are briefly annotated. Articles cover two topics: teacher behaviors and classroom climate, and factors to consider in using rewards. The findings of these studies are discussed in a five-page summary. Four recommendations are given on the basis of this research: (1) The classroom teacher should take responsibility for providing an atmosphere conducive to motivation for all students; (2) All students should be given opportunities for successful learning experiences; (3) All students should be allowed to help determine their educational goals; and (4) External reinforcement systems should be used only when necessary to engage student involvement and should be selected and monitored carefully. (CB)

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AN ANNOTATED BIBLIOGRAPHY OF THE LITERATURE DEALING WITH ENHANCING STUDENT MOTIVATION IN THE ELEMENTARY SCHOOL

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INTRODUCTION

The elementary classroom contains students with differing needs, learning styles, and degrees of motivation toward performing educational tasks. The teacher's role in the classroom is to tap the resource of student potential so that all students become willing to accept responsibility for their learning. (Chamberlin 1981:3) Students need to be willing to take risks, experiment with new ideas, and work with persistence toward accomplishing their educational goals. The goal of the learning process is to encourage students to learn the fundamentals and use them to solve problems that they encounter. (Deci, 1981:19)

STATEMENT OF THE PROBLEM

All students enter school with a basic desire for knowledge; however, the classroom teacher may find that not all students respond willingly to new learning tasks and activities that are presented. While some students possess the desire and motivation to learn, other students will be reluctant to try new activities at which they expect to fail. (Chamberlin 1981:6) The problem for the teacher is to identify and implement methods that will increase the intrinsic motivation of these reluctant learners so that all students in the classroom will seek information that is of interest and value to them. The teacher

must help students learn to set reasonable goals for themselves and to persist in carrying out activities that will enable them to realize their goals.

PURPOSE OF THE STUDY

The classroom teacher is responsible for helping all of his/her students to learn. In order to accomplish this task most effectively, the teacher needs to be able to arouse the interest of students and maintain motivational levels sufficient to keep students involved in learning tasks. This study is designed to provide information about teaching techniques and instructional methods that will enable the teacher to make sound decisions about appropriate learning activities and student reinforcement procedures for his/her classroom. When implemented, this information should help to create a climate conducive to individual exploration and student fulfillment.

ORGANIZATION OF THE STUDY

This work will address the problem of increasing student motivation by seeking answers to the following questions: (1) What factors in the classroom climate will enhance student motivation? (2) What can the classroom teacher do to help students become self-motivated? and (3) Will the use of rewards (verbal, symbolic, or tangible)

increase students' self-motivation? If so, how and when should the teacher use them?

The literature pertaining to creating the classroom climate and selecting appropriate teacher behaviors has been presented together in this work because of the natural interaction of the two factors in the learning environment.

The final questions require an examination of classroom reinforcement procedures to determine their effects on student behavior and the desirability of their use.

LIMITATION OF THE STUDY

The topic of student motivation has been one of educational concern for decades and the research that has been conducted is extensive. Time limitation prohibited the examination of all the relevant data. Further study would expand upon the concepts presented in this paper; however, it is believed that the literature reviewed represents a broad overview of the research findings related to this topic.

GLOSSARY

extrinsic motivation -- "the use of rewards or punishments external to intrinsic interests in the material itself in the attempt to control behavior." (Good 1973:375)

intrinsic motivation -- "determination of behavior that is resident within an activity and that sustains it." (Good 1973:375)

locus of control -- "personality construct referring to an individual's perception of the place of events as determined internally by his/her own behavior against luck, fate, or external forces." (Page 1977:209)

motivation -- "a combination of psychological forces which initiate, direct, and sustain behavior toward successful attainment of some goal which provides a sense of significance." (Good 1973:375)

overjustification hypothesis -- "a person's intrinsic interest in an activity may be decreased by inducing him to engage in that activity as an explicit means to some extrinsic goal." (Lepper 1973:129)

reinforcement -- "concept denoting an event that influences the probability of a response to a stimulus being produced again under similar conditions." (Good 1973:288)

self-perception theory -- "...a person engages in processes of inference about his own behavior and its meaning." (Lepper 1973:129)

ANNOTATIONS

WHAT CAN THE TEACHER DO?
TEACHER BEHAVIORS AND CLASSROOM CLIMATE

Adelman, Howard S., and Chaney, Lee A., "Impact of Motivation on Task Performance of Children with and without Psychoeducational Problems," Journal of Learning Disabilities 15:242-244, April, 1982.

This study was part of a series designed to focus on commitment and motivation to perform school tasks and tests among problem and nonproblem students. The problem students were of average or above-average intelligence and had been referred to a special facility because of school difficulty. Students were given a task to perform and were later asked to volunteer to repeat the task only if they would agree to do their best. This was done to give students a choice and a personal stake in the activity. All students had higher posttest scores, but only the problem students who volunteered displayed additional, significant improvement. The findings support the idea that any motivational strategy will be successful in proportion to its relevance and the initial level of performance motivation.

Allen, Rodney P., Motivating Students in a Classroom Setting: A Group Instructional Module for Teacher Education Centers, Educational Resources Information Center, ED 204 162, Florida State University, Tallahassee, Teacher Education Center, 1981, 61 pp.

Allen presents a complete packet of information designed for use in a group setting to acquaint the individual teacher with the principles of and approaches to fostering motivation in the classroom. Each participant in the program is given practical exercises in which s/he is to apply the fourteen principles of motivation to specific situations. These principles include varied suggestions for teacher interaction with students and methods for presenting activities of interest to students. A hierarchy of six classroom approaches to motivation is also given. The six strategies involve the use of: (1) status as the teacher, (2) power, (3) rewards, (4) personal attractiveness, (5) group affiliation, and (6) creditability of the learning. The teacher is urged to use the highest level approach to which the students will respond.

Anderson, Linda M., Student Responses to Classroom Instruction, Educational Resources Information Center, ED 212 626, Michigan State University, East Lansing, Institute for Research on Teaching, September, 1981, 28 pp.

Anderson reports two important principles for the teacher to focus on while engaging in classroom instructional activities. The first is that the teacher needs to continually be aware of student response to the material being presented. The student needs to be drawn into discussions and classroom activities in order to maintain motivation. The second principle presented is that the teacher needs to help the student learn how to respond to instructional materials. The student should be encouraged to seek help and ask for feedback about his/her work. The teacher should match activities to the learner to ensure student success and maintain frequent individual contacts to check student understanding.

Bowen, Charles E., and Madsen, Charles H., Jr., "Teaching Style: A Primary Determinant of Student Motivation," Journal of Education 160:16-24, Fall, 1978.

This article looks at aspects of teaching style that have been linked with student motivation and teacher effectiveness and presents methods for improving teaching style. Some of the suggestions offered are that the teacher: (1) display a positive attitude toward learning, (2) be enthusiastic, (3) be flexible, (4) show approval frequently, (5) give students regular opportunities to express their ideas, (6) use activities that encourage student interaction, and (7) utilize student interests and suggestions in making instructional decisions. Bowen asserts that the teacher who is willing to work to improve his/her teaching style by employing the above suggestions will find an increase in the level of student interest and motivation in his/her classroom.

Bradford, Ronald W., "The Importance of Need and Success in Motivating Students to Achieve," National Association of Secondary School Principals Bulletin 65: 32-36, January, 1981.

Bradford discusses ways in which the classroom teacher can effectively function to help foster student motivation. He states that teacher motivation is important in generating enthusiasm for learning and in setting up positive expectations for the learners. He also asserts that teacher organization and knowledge of student interests is important in facilitating motivation. The author offers suggestions for teachers who wish to help their students become more intrinsically motivated. Teachers can begin helping students to enhance their self-esteem by providing positive learning experiences. Students then need to be helped in learning how to set goals that are realistic and in working to follow through to the completion of their plans. Positive feedback from the teacher and a genuine concern for the student will help to provide a climate where learning becomes challenging and rewarding for all students.

Brawer, Michael P., Integrating Motivational Activities into Instruction: A Developmental Model, Educational Resources Information Center, ED 222 106, Florida V-TECS, Department of Education, Tallahassee, Florida, April, 1982, 16 pp.

Brawer sets up a network of instructional events that the classroom teacher can use to create activities that will be motivating for his/her students. He asserts that a lesson will be motivating if it focuses on the needs of the learners. The teacher must decide if the content to be presented will be of interest to his/her students. If so, the following steps will aid the teacher in using motivational activities that will be effective: (1) determine the needs of learners with regard to types of media, (2) take into account prior use of media in classroom activities, (3) look at activities for feasibility within the classroom, and (4) choose events that will best fit the current learning situation in the classroom. When students are presented with activities appropriate to their needs, they will be interested in interacting with the materials and will learn those concepts that are of interest to them.

Brophy, Jere E., Fostering Student Learning and Motivation in the Elementary School Classroom, Educational Resources Information Center, ED 216 008, Michigan State University Institute for Research on Teaching, East Lansing, Michigan, April, 1982, 61 pp.

This work examines several motivational approaches that have been used in classrooms and provides data to recommend or discourage their continued use. The practice of using reinforcement systems was not encouraged because it is impractical in that teachers cannot reinforce all appropriate behaviors, it is least effective with students who have the most difficulty, and it tends to decrease intrinsic motivation. The use of Cognitive Behavior Modification was then presented as a more practical method because students were taught to set their own goals, monitor and record their own progress, and reinforce their own appropriate behavior. The system Brophy preferred is one that works toward building intrinsic motivation in students because students then find value in their own search for knowledge. To implement this system the teacher should: (1) communicate desirable expectations, stress intrinsic value of participation and gains in knowledge, (2) make sure that the tasks presented will provide feedback about the quality of student performance to provide student satisfaction, and (3) be aware of task presentation methods that make positive statements of expectation and stress the knowledge and skills that the task will provide.

Brophy, Jere E.; Rohrkemper, Mary; Rashid, Hakim; and Goldberger, Michael, Relationships between Teachers' Presentations of Classroom Tasks and Students' Engagement in Those Tasks, Educational Resources Information Center, ED 221 529, Michigan State University, East Lansing, Institute for Research on Teaching, June, 1982, 21 pp.

This study was constructed to analyze the relationships between statements teachers made in introducing classroom tasks and the amount of later student engagement observed in those tasks. The attitude statements of six teachers were recorded and categorized during reading and math periods within their classrooms. It was expected that students would be more actively involved during periods following positive teacher presentations and less actively involved following negative teacher statements. The results revealed, however, that student engagement was shown to be higher when no teacher introductory remarks were made. Students seemed to be more motivated when they went straight to work on the task at hand. More research is suggested to determine if these findings can be further supported.

Carlson, Nancy A., "General Principles of Learning and Motivation," Teaching Exceptional Children 12:60-62, Winter, 1980.

Carlson lists in this article steps that can be taken by the classroom teacher to help facilitate student learning. Suggestions for increasing motivation include: (1) providing the student with choices about learning tasks, (2) making sure that the student has adequate prerequisite skills to succeed with new learning tasks, (3) providing a performance model the student can imitate, (4) giving clear directions, using varied activities, and providing opportunities for questioning, (5) practicing skills for short periods over time, and (6) providing an atmosphere that is pleasant where constructive feedback is readily available.

Chamberlin, Leslie J., "The Greatest Gift," Childhood Education 58:2-7, September - October, 1981.

This article lists steps that can be taken by the classroom teacher to help create confidence in each student's atility to learn. Measures include creating an environment in which the student does not feel threatened or afraid of failing at a given task, projecting a positive attitude toward each student and the work at hand, encouraging student success, and reinforcing appropriate behaviors. Stress is also given to the importance of clear communication between the student and teacher so that the learner knows what teacher expectations are, can help in the decision-making process concerning his/her own learning, and has an understanding of the reasoning behind the tasks s/he is asked to accomplish.

Deci, Edward L., and Ryan, Richard M., Curiosity and Self-directed Learning: The Role of Motivation in Education, Educational Resources Information Center, ED 206 377, ERIC Clearinghouse on Elementary and Early Childhood Education, Urbana, Illinois, 1981, 24 pp.

Thirty-five fourth through sixth grade classrooms were used in a study to compare student perceptions in classrooms where teachers were control-oriented with students perceptions in classrooms where teachers were autonomy-oriented. It was found that the teachers using autonomous teaching methods had students who performed better academically and who were more highly motivated. It is suggested that the teacher give students choices about their learning and that s/he arrange experiences that will provide positive feedback for them. Students need to see the teacher as a person who can be trusted and empathetic. The authors suggest that tangible, verbal and self-administered rewards could be used effectively if they were designed to give positive feedback about the level of student performance without trying to control student behavior.

Dinkmeyer, Don, and Dreikurs, Rudolf, Encouraging Children to Learn: The Encouragement Process, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1963, pp. 7-56.

This work presents to the classroom teacher a rationale and method for using encouragement as a tool for increasing student motivation. The authors point out that often the student who lacks intrinsic motivation has a low self-concept resulting from repeated failures. The key to changing the self-image and motivational level is to focus on encouraging the child in the classroom. To implement this theory the teacher needs to: (1) value the child as s/he is, (2) show faith in the child, (3) have faith in the ability of the child to succeed, (4) give positive feedback in response to effort, (5) use the group to enhance the child's development, (6) help the child create his/her place in the group, (7) help the child build upon successful work experiences, (8) focus on the child's strengths and positive contributions, and (9) build instruction around the interests of the child. As the child encounters success academically, his/her confidence will be enhanced and s/he will be motivated to seek further knowledge.

Farrell, John A., "Motivation and Learning --- It's as Easy as Riding a Bike," National Association of Secondary School Principals Bulletin 66:5-8, May, 1982.

Farrell likens the process of learning new material to that of learning to ride a bike as he cites the work of Madeline Hunter at U.C.L.A. on the identifying qualities important to the processes of teaching and learning. One basic principle identified is that of the incremental nature of the learning process with the student needing mastery of basic skills in order to grasp broader ideas. Also listed in this article are factors that affect the student's motivation that can be controlled by the classroom teacher. S/he needs to be aware of the feelings and interests of the student toward new learning, make sure that the level of difficulty is appropriate to ensure success, provide the student with feedback as soon as possible, and keep the use of extrinsic rewards at a minimum. The teacher who is able to implement knowledge of these factors will be better able to facilitate learning in his/her classroom.

Gibbs, Graham; Morgan, Alistair; and Taylor, Liz, Understanding Why Students Don't Learn, Educational Resources Information Center, ED 189 982, The Open University, Walton, Bletchley, Bucks, Institute of Educational Technology, July, 1979, 25 pp.

This paper asserts that students do not learn as quickly and easily as teachers would like because students do not possess the study skills necessary to succeed. The teacher who wishes to have highly motivated, confident learners would do well to help them find functional and effective ways to study. Goals of the instructor should be to: (1) help students gain a better understanding of the learning process, (2) help students see the purposes of study tasks, and (3) to acquaint students with various study methods that can be used at their discretion. As students learn to think through problems and find successful study methods, they will develop feelings of competency and will be more highly motivated to seek new challenges.

Gottfried, Adele Eskeles, "Relationships between Academic Intrinsic Motivation and Anxiety in Children and Young Adolescents," Journal of School Psychology 20:205-15, Fall, 1982.

Subjects for this study were one hundred forty-one fourth and seventh grade students who were asked to respond to two self-report inventories. One inventory rated the academic intrinsic motivation of students while the other measured the students' academic anxiety levels. Both instruments were divided into the subject areas of math, reading, science, and social studies. The results of the study indicate a negative relationship between intrinsic motivation and anxiety. The classroom teacher is advised to try to keep anxiety levels low to maintain the highest levels of motivation possible in the classroom. It is also recommended that the teacher be aware that individual student anxiety levels will differ among the academic areas so that varied and successful learning experiences can be planned for all students.

Hughes, James R., "How Do You Behave? Your Nonverbal Actions are Critical to Student Motivation," Music Educators Journal 67:52-53, January, 1981.

Hughes discusses many ways in which teachers influence student self-esteem through nonverbal behavior. Nonverbal behavioral cues to focus on are physical distances, postures, gestures, facial expressions, eye contact, and changes in vocal pitch, volume, quality, and rate. The author also advocates touching to communicate trust and concern to the student. Inservice training through role playing is suggested to sharpen teacher nonverbal skills and teachers are encouraged to develop and convey high expectations for the student. By enhancing the student's self-esteem, the teacher helps to build confidence and raise the student's motivational level.

Ireton, Elmer J., and McDonald, Xene, "Motivation in the Modern Classroom," Clearing House 52:317-21, March, 1979.

This work discusses factors responsible for the lack of student motivation, implications for the classroom teacher, relevance of motivational theories, and current trends in motivation. The basic message is that the teacher must reach the student on an individual basis in order to successfully motivate him/her. It is recommended that the teacher provide more individualized learning programs to help create meaningful experiences, use varied techniques and equipment to provide for individual learning styles and preferences, help the student select successful learning experiences, and provide the student with help in setting goals for his/her own academic achievement.

Jones, R. Steward, "Teachers Who Stimulate Curiosity," Education 101:158-65, Winter, 1980.

This article focuses on the responses of forty teachers from Illinois to questions about capitalizing on student curiosity. These teachers were nominated by their principals for their ability to stimulate pupil curiosity in the classroom. The belief that was most evident in their responses was that a teacher who is adept at asking and dealing effectively with student questions and providing many and varied "hands-on" experiences for students will be the most successful at stimulating students' existing curiosity. Teacher training programs are advised to focus on sharpening questioning skills and strategies and on providing teachers with new methods for presenting learning tasks in interesting ways.

Landen, James L., and Willems, Arnold L., "Do You Really Know How to Motivate Children?" Education 99:283-286, Spring, 1979.

Determining the effects of forced activity on student attitudes was the focus of this study in which twenty-six students were divided into two groups. Students in the control group were allowed to select activities of their choice each day. Students in the experimental group were required to engage in an activity they chose as their favorite each day. To simulate curricular activities at school, students in the experimental group were required to take a situational test at the end of each two-week period. Results of the study revealed that most members of the control group spent the majority of their time on their chosen activities while most members of the experimental group had developed negative attitudes toward their activities. It is recommended that the teacher provide a variety of classroom activities for students to choose from to maintain interest and increase levels of intrinsic motivation.

Napier, Erv, "Competition in the Classroom," Kappa Delta Pi Record 18:18-19, 23, Fall, 1981.

Napier proposes that teachers examine their use of competition in the classroom to determine whether or not it is worthwhile to put students in a competitive setting. He suggests several possible negative results of competitive situations that should be considered. Some students may exhibit aggressive behaviors, anxiety may be raised to unnecessary levels, and teacher-student relationships may become strained as the teacher seems more powerful. Competition may undermine a trusting, cooperative climate, lead students to display themselves as superior at the expense of their classmates, and for some students school will become an unpleasant place to be because of repeated failures. Napier suggests that, since success and self-esteem are important for every student, perhaps competition in the classroom should be avoided or at least used with discretion.

Parkay, Forrest W., A Person-Centered, Inquiry Oriented Approach to Teaching Basic Skills, Educational Resources Information Center, ED 206 612, Southwest Texas State University, 1978, 14 pp.

Parkay discusses ways in which the classroom teacher can alter his/her behavior to help students become more confident of their own abilities and more motivated to explore new learning opportunities. The teacher model proposed contains three necessary conditions: (1) the teacher establishes positive relationships with students, (2) the teacher encourages and models clear thinking processes, and (3) the teacher shows how gaining knowledge and thinking skills can enrich students' lives. The teacher is encouraged to help students define personal and group goals and to direct activities in terms of these goals. When students are aware of ways in which they can be effective in their personal lives, they will be motivated to continue to learn because of the pleasure learning affords.

Pearlman, Charles, "The Measurement of Effectance Motivation," Educational and Psychological Measurement 42:49-56, Spring, 1982.

This study was designed to measure effectance motivation in students. Effectance motivation is a theoretical construct used to explain behaviors such as curiosity, exploration, mastery, play, and the way in which the individual attempts to deal competently with the environment. Six hundred 6th grade students from four public schools were assessed by the following three measures: (1) Teacher Effectance Motivation Rating-Teachers rated each student on a list of positive and negative characteristics related to effectance motivation, (2) Effectance Motivation Distribution-Teachers were given a definition of effectance motivation and a class roster and asked to choose the students that best and least fit the definition, and (3) Student Respondent Effectance Motivation Measure-Each student was given the choice of doing a difficult problem or an easy one. The study compiled the three ratings and linked intelligence to effectance motivation because intelligence contributes to competence and success. They also found that some students who did not have high I.Q.'s still chose to attempt the more challenging problem. This suggests the possibility of creating effectance motivation in students. The study recommends further research.

Schunk, Dale H., Applying Motivation Theories to Individual Differences in the Classroom: A Social Learning Perspective, Educational Resources Information Center, ED 185 052, paper presented at the Annual Meeting of the Southwest Educational Research Association, San Antonio, Texas, February, 1980, 10 pp.

Schunk stresses the need for helping students learn to accurately judge their own capabilities in this article. Social Learning Theory recognizes two sources of cognitive-based motivation. One source is the ability to incorporate future consequences into current thought processes. The other source is the ability to compare some desired standard with one's own performance capability. The significance of accurate self-perception is that students can set reasonable goals for their own improvement that will lead to success. The teacher can help by aiding students in focusing on strengths and weaknesses, by giving positive feedback about students' efforts, and by allowing students freedom to set their own goals and monitor their progress using their own standards. By helping students to gain confidence in themselves, the teacher helps them to become more interested in their world.

Wlodkowski, Raymond J., Motivation and Teaching: A Practical Guide, National Education Association, Washington, D.C., 1978.

Wlodkowski examines many aspects of motivation in this work and helps the teacher to focus on specific behaviors that can be employed to enhance student motivation. The author advocates incorporating the factors of attitude, need, stimulation, interest and involvement, affect, and competence within learning activities so that there will be no need for the use of extrinsic reinforcers. If extrinsic reward systems are used, it is emphasized that care should be exercised in their selection and implementation. The teacher is provided with detailed plans and examples showing how motivational techniques can be used in lesson planning on a daily basis. Wlodkowski believes that the teacher as well as the student receives benefits from using motivational strategies in the classroom. His/her motivation toward the process of teaching will increase as student motivation toward the process of learning increases.

SHOULD REWARDS BE USED?
FACTORS TO CONSIDER

Bates, John A., "Extrinsic Reward and Intrinsic Motivation: A Review with Implications for the Classroom," Review of Educational Research 49:557-576, Fall, 1979.

This article is an extensive review of research conducted on the theories of self-perception, personal causation, and overjustification and their effect on the intrinsic and extrinsic motivation of students. Results of studies using varied tangible and social reward conditions are compared and inadequacies in the studies are pointed out. Generalizations drawn from the studies are that intrinsic interest is generally decreased when rewards are given solely on the basis of participation and that the use of social reinforcements such as praise may enhance intrinsic motivation if the reinforcements relate directly to the task, are presented clearly, and are given at appropriate time intervals. Bates questions the use of reinforcers when long-term maintenance of behavior is the goal because the student may perceive the task and reinforcer as one unit and lose significant intrinsic motivation. Bates suggests further research to support or refute these findings.

Condry, John, "Enemies of Exploration: Self-Initiated Versus Other-Initiated Learning," Journal of Personality and Social Psychology 35:459-477, July, 1977.

This paper discusses the ways in which extrinsic incentives work to undermine task learning and subsequent interest in the task. Several types of rewards are reviewed and the basic generalization that is drawn is that the power of the undermining effect depends upon the strength of the incentive. Crucial variables to the undermining effect are the degree to which the person initially chooses the behavior and the resulting feedback s/he receives. Condry suggests that it is the offer of the reward and not the reward itself that is responsible for undermining motivation since unanticipated rewards do not seem to produce an undermining effect. The quality of task performance is examined as subjects who are given tangible rewards tend to make more errors, take more time to solve problems, respond with less creativity, and not function as well in response-stimulus recall situations as subjects who are given no reward. Evidence is presented to support the idea that the process of learning is also affected by reward situations. Extrinsic rewards lead subjects to use restricted thought processes when confronted with new learning or problem-solving situations. No-reward conditions tend to encourage free thinking and creativity.

Danner, Fred W., and Lonky, Edward, "A Cognitive Developmental Approach to the Effects of Rewards on Intrinsic Motivation," Child Development 52:1043-52, September, 1981.

Two experiments were set up in this study to test the theory that intrinsic motivation depends upon the match between cognitive level and task demands and to examine the effects of praise and extrinsic rewards on levels of intrinsic motivation. The results of the first experiment revealed that the children involved in the study did choose and reported as most interesting tasks that they were capable of accomplishing, but that were just beyond their present developmental level. The second experiment examined the effects of rewards and praise on groups of children. Results presented evidence that children who were developmentally matched to the task they were given performed better in a no-reward condition. The group that was highest in intrinsic motivation prior to the introduction of rewards was the only group for whom a significant decrease in intrinsic motivation occured with the use of a reward system. Conclusions that may be drawn from these studies are that teachers can better match tasks to children by providing more learning choices for children and that the use of external reinforcers be restricted to those children who will benefit from them.

Deci, Edward L., "Effects of Externally Mediated Rewards on Intrinsic Motivation," Journal of Personality and Social Psychology 18:105-115, April, 1971.

Deci set up this study to examine the effects of external reinforcement on intrinsic motivation by using money and social approval as rewards for desired behavior. College students were the subjects of the three experiments conducted. Conclusions drawn from the experimental results were that: (1) money decreases intrinsic motivation possibly because subjects view it as external control over their actions, and (2) rewards such as verbal reinforcement and positive feedback do not negatively affect intrinsic motivation because these forms of reward are not perceived as attempts to control subjects' behavior.

Dollinger, Stephen J., and Thelen, Mark H., "Overjustification and Children's Intrinsic Motivation: Comparative Effects of Four Rewards," Journal of Personality and Social Psychology 36:1259-69, November, 1978.

This study was designed to make a direct comparison of the effects of tangible, symbolic, verbal, and self-rewards on the intrinsic motivation of students and to determine if rewards are more harmful to the intrinsic motivation of students holding internal beliefs of control. Sixty 4-8 year-olds were given mazes to complete in this study. Rewards were contingent on successful performance and were expected by the students. Results revealed that students in the self-reward and tangible reward groups showed significantly less intrinsic motivation than the control group, while those in the verbal and symbolic reward groups did not differ from the control group. Verbal rewards were not shown to have either a positive or negative effect on intrinsic motivation. Dollinger presents the idea that performance-contingent symbolic rewards may be sufficiently informational to counteract any potential detrimental effects. Children in the control group reported slightly lower feelings of competence than those in the reward groups, which implies that rewards can decrease intrinsic motivation while increasing feelings of competence. This study also points out that it is important to consider the many effects that rewards can have on motivation before deciding on their appropriate use.

Karniol, Rachel, and Ross, Michael, "The Effect of Performance-Relevant and Performance-Irrelevant Rewards on Children's Intrinsic Motivation," Child Development 48:482-487, June, 1977.

Fifty-seven 4-9 year old children participated in this experiment which was designed to show the relationship between intrinsic interest and the use of reward systems. The children were placed in three groups and were asked to manipulate a machine that was programmed to give each child ten correct answers. Children in the performance-relevant reward group received rewards based upon their levels of performance, those in the performance-irrelevant group received rewards for participating, and those in the control group received no rewards. Children were then given free time to play with toys or with the experimental game to measure their intrinsic interest in the activity. No major differences were seen between the control and performance-relevant reward groups, but significant information about the performance-irrelevant rewards was obtained. The results of this study suggest that performance-irrelevant rewards undermine intrinsic interest when children have succeeded because the rewards diminish the importance of the success. Performance-irrelevant rewards are seen to enhance intrinsic motivation, however, when children have failed because they lessen the focus on the failure.

Kolesnik, Walter B., Motivation: Understanding and Influencing Human Behavior, Allyn and Bacon, Inc., Boston, 1978, pp. 178-242.

Kolesnik offers the teacher practical suggestions for dealing with the intrinsic and extrinsic motivation of students. He encourages the teacher to focus on students' interests and to use a variety of techniques such as problem-solving activities, games, and simulations to actively involve class members. He also suggests the use of exercises in creativity and the presentation of stimulating materials that will arouse students' curiosity. The use of verbal and written feedback is stressed and the teacher is acquainted with the pros and cons of grading, testing, and behavioral management techniques. Caution is advised in the use of tangible reinforcement techniques and individual and group competition within the classroom. The teacher is reminded that classroom strategy decisions are best made when individual and group needs are given thoughtful consideration.

Lepper, Mark R., and Greene, David, "Turning Play into Work: Effects of Adult Surveillance and Extrinsic Rewards on Children's Intrinsic Motivation," Journal of Personality and Social Psychology 31:479-486, March, 1975.

Eighty 4 and 5 year old preschool children were involved in this study which was designed to try to replicate earlier results concerning the effects of external rewards on intrinsic interest. The study simultaneously examined the effects of adult surveillance on intrinsic interest through the use of an observable T.V. camera. Children were asked to manipulate geometric shape puzzles and were alerted to surveillance by a light on the work table. Results of the study revealed a decrease in intrinsic interest when children expected and received an extrinsic reward with an additional decrease in later interest when surveillance was introduced. More research is suggested to examine the use of personal surveillance. Lepper advises the teacher that the use of external rewards be kept at a minimal level to best provide for increased intrinsic motivation in children.

Lepper, Mark R.; Greene, David; and Nisbett, Richard E., "Undermining Children's Intrinsic Interest with Extrinsic Reward: A Test of the 'Overjustification' Hypothesis," Journal of Personality and Social Psychology 28:129-137, October, 1973.

Preschool children aged 40-64 months were selected for this study by their initial interest in a free drawing activity using multicolored felt-tipped pens not normally available for use in their classroom. This activity was chosen because it was similar to other types of activities found in the classroom, was attractive enough so that most children found it interesting, and it was relatively easy to measure objectively the students' interest levels. Children were placed in one of three treatment conditions. The control group received no award, the expected-award group received a certificate for agreeing to participate, and the unexpected-award group received the same certificate upon completing the activity but had no prior knowledge of the award. The study upheld the overjustification effect in that those children in the expected-award condition displayed less later intrinsic interest in the activity than children in either of the other groups. Lepper advises the use of extrinsic rewards only when they are necessary in order to promote involvement in the activity or when an activity required some level of involvement or mastery before it appears to be attractive to participants.

Pallack, Suzanne R.; Costomiris, Steven; Sroka, Susan; and Pittman, Thane S., "School Experience, Reward Characteristics, and Intrinsic Motivation," Child Development 53:1382-91, October, 1982.

This study was undertaken to see what effect prior experience with rewards and reward contingencies had on the intrinsic motivation of students. The research data was based on a study of seventy-two 5-7 year-olds attending private metropolitan schools. The study found that an expected reward could enhance student motivation if the reward was used to indicate the achievement of a particular level of performance because the child's sense of personal control could be enhanced. For children attending schools in which symbolic rewards were not used, receiving an expected symbolic reward undermined intrinsic motivation, while intrinsic motivation was enhanced by receipt of expected praise. Children attending schools in which there was extensive use of symbolic rewards appeared to perceive symbolic rewards and praise similarly. The conclusion reached was that a student's reaction to reward characteristics was affected by prior school experience.

Sattler, Howard E.; Betz, M. Austin; and Eubanks, James L., "Effects on Children of Reinforcement and Response Cost: A Relation of Learning to Motivation," The Journal of Psychology 103:249-254, November, 1979.

This study explored the use of reinforcement and response-cost conditions on a group of ninety-six second grade students. Students were placed in one of the following four groups: (1)tone only - a bell was sounded to indicate a correct response; (2) tone and penny - one penny given with the bell for each correct response; (3) response-cost unearned group - subjects were given 100 pennies and lost one penny for each incorrect response; and (4) response-cost earned - subjects earned 100 pennies by playing a game before participating in the activity and lost one penny for each incorrect response. The results of this study showed that students in the response-cost groups displayed longer response times and required more trials to meet the criterion level than did students in the groups receiving only reinforcement. This study shows that penalizing students for incorrect responses has a negative effect upon their performance while reinforcing correct behavior does not; however, a control group was not utilized in this study and might have altered the conclusions that were drawn.

Stringer, Bobbi Phe, and Hurt, H. Thomas, To Praise or Not to Praise: Factors to Consider before Utilizing Praise as a Reinforcing Device in Classroom Communication Process, Educational Resources Information Center, ED 202 054, paper presented at the Annual Meeting of the Southern Speech Communication Association, Austin, Texas, April, 1981, 17 pp.

Stringer lists eight generalizations about the positive and negative effects of praise that have been suggested by research. The findings cited that favor the use of praise in the classroom are that achievement is generally improved when praise is utilized, that praise can be effective at reinforcing acceptable classroom behavior, and praise is not harmful and can be of value when it is used to give appropriate feedback to students about the quality of their work. Findings cited that discourage the use of praise as a form of reinforcement in the classroom are that praise may be threatening to students who do not have a positive self-image, it may inhibit student responses, it may create a competitive classroom climate as students try to obtain praise for their work, and that praise is an external reward which will lessen intrinsic motivation. The teacher is encouraged to weigh the positive and negative aspects of praise before deciding whether it is appropriate for use in his/her classroom.

Weinberg, Robert S., and Jackson, Allen, "Competition and Extrinsic Rewards: Effect on Intrinsic Motivation and Attribution," Research Quarterly 50:494-502, October, 1979.

This study was designed to examine the relationship between monetary rewards, success or failure, intrinsic motivation, and causal attributions. Forty male and forty female college students were subjects in this experiment and were asked to participate in a balancing task, which they were told would be a good indicator of their potential success in sports involving perceptual motor ability and balance. They were divided into a control group in which no reward was given and an experimental group in which money was given in relation to students' achievement. Results of this study revealed that more intrinsic motivation was evident after success than after failure. Success was attributed to high ability, a large amount of effort, high intrinsic motivation, and good luck. Failure was attributed to low ability, little effort, low intrinsic motivation, and bad luck. Weinberg suggests that teachers be aware of the power of success and failure and their corresponding reflections on individual self-worth. Competition should be used with care.

Workman, Edward A., and Williams, Robert L., "Effects of Extrinsic Rewards on Intrinsic Motivation in the Classroom," Journal of School Psychology 18:141-147, Summer, 1980.

This paper examines the distinction between extrinsic and intrinsic reinforcement, possible justification for the use of extrinsic rewards in the classroom, and the ways in which the classroom application of extrinsic rewards affects the intrinsic reinforcement value of appropriate classroom behaviors. Ten studies were included in the review of reward application in three categories of target behaviors: (1) on-task behaviors, (2) social interaction behaviors, and (3) disruptive behaviors. These studies all met the following criteria: (1) external reward procedures were clearly shown to be functionally related to changes in target behaviors, (2) target behaviors were regular dimensions of classroom performance and not responses typically occuring only in laboratory settings, (3) follow-up periods involved the use of direct behavioral observations of target behaviors, (4) observations of target behaviors were taken primarily in the students' classroom situations, and (5) systematic external reinforcement was clearly absent during the follow-up periods. The results of these studies suggest that intrinsic interest in classroom behaviors can best be produced and successfully maintained by combining the use of verbal praise with tangible rewards.

SUMMARY

The most powerful tools for enhancing student motivation are within the grasp of the classroom teacher. Since teacher behavior is integral in providing a classroom climate conducive to high levels of student motivation, s/he need only examine his/her present behaviors critically and apply the findings and suggestions of researchers to his/her own classroom to begin effectively increasing motivation.

The importance of positive teacher attitudes toward learning is reported in many of the studies. Bradford reports teacher motivation and positive expectations as essential in any attempt at improving student motivation. Allen supports the use of the importance of learning as one of the best motivational tools. Parkay asserts that the accumulation of knowledge can be seen as a method for enriching student lives. Research findings in a study by Brophy suggest that the teacher not make attitudinal comments before each activity; however, a general attitude of enthusiasm for learning is vital.

The teacher is also encouraged to be well-prepared for classroom instruction. Bradford stresses the need for good teacher organizational methods and Wlodkowski urges the detailed planning of direct motivational activities throughout the curriculum. Parkay states that the

teacher will assist students by presenting a clearly thinking adult model for them to imitate.

The teacher can also enhance student motivation through his/her interactions with students. The creation of a non-threatening environment will help increase student motivation by providing student support. Chamberlin points out the importance of allowing students to make mistakes without fear of ridicule. Gottfried suggests that anxiety be kept at a minimum due to its negative effect on intrinsic motivation. The teacher is encouraged by Parkay to restrict the use of competition in the classroom to allow students to maintain their self-esteem. Deci reports the need for the teacher to be regarded by students as one who can be trusted and who will be understanding of their concerns. Positive non-verbal behaviors can be utilized effectively, reports Hughes, so the teacher who is aware of his/her unspoken messages can work to ensure that they will be positively perceived by students.

Research suggests several methods for increasing student motivation by adapting curriculum. The importance of providing learning experiences that center on the needs and interests of students is evidenced in many reported findings. Farrell emphasizes the importance of providing successful learning experiences for all students by matching academic tasks to learners. Ireton takes that concept further to urge the individualization of instruction to

ensure student success for all.

Bowen and Madsen stress the need for teacher flexibility in providing students with opportunities to express their ideas and in using those ideas to make instructional decisions. The benefits of allowing students to make choices about their learning are presented by Adelman who found evidence of significant improvement in academic performance when students were given control over their learning decisions. Landen and Willems reported the same findings for students making choices and also found a negative attitude surfacing toward activities students had chosen but were forced to participate in.

It is pointed out by Gibbs that many students do not know how to employ study skills effectively. He stresses that students need to understand the purposes of study and be made aware of various methods that can be used to accomplish learning tasks. Anderson urges that the teacher encourage students to seek help when it is needed to facilitate successful study experiences.

The importance of goal formulation is raised by Bradford, who suggests that the teacher aid students in learning to set academic goals for themselves. Schunk adds that it is imperative for students to have accurate self-perceptions of their learning capabilities so that proposed goals will be realistic. Students will be more motivated to achieve goals that they have had a part in

formulating and will be able to succeed when goals are within their reach.

The teacher can provide valuable assistance to students in everyday learning situations by employing positive response methods in the classroom. One integral teacher behavior surfaced in many studies. Evidence was presented showing increased student motivation when prompt feedback was given to students. Approval statements were also recommended for their reinforcing effects. Dinkmeyer and Dreikurs pointed out the positive effects of encouragement when students' strengths were emphasized and their ability to learn was validated. The use of praise to reinforce classroom achievement was suggested by several studies. Bates supports its function when it is directly related to the task, clearly presented, and given at appropriate intervals of time. Stringer, however, asserted that praise might not be perceived positively by students with low self-concepts because it would not fit with their views of self. The teacher needs to be aware that individual responses may vary.

Chamberlin asserts that the clear presentation of lessons, examples, and expectations in the classroom will increase student motivation by minimizing confusion and demonstrating successful strategies that can be modeled. The benefits of checking student understanding through questioning are reported by Anderson. Individual and

group problems can be handled as they arise to avoid compounded frustration.

Stimulating curiosity is suggested by Jones who advocates the use of questioning techniques to arouse student interest. "Hands-on" experiences are also proposed to encourage students to think creatively in new learning situations.

The use of extrinsic rewards to enhance motivation is reported to produce a decrease in students' intrinsic motivation. Dollinger and Thelen suggest that rewards were perceived to be controlling forces which produced the negative response. Evidence to support decreases in motivation following the presentation of rewards based solely on participation was reported by Bates. Condry also cited negative effects following reward procedures as more frequent errors, longer response times, and restricted thought processes.

Donner and Lonky found that students who were working at a level corresponding to that of their current development performed best in a condition where no rewards were given for work. Most researchers suggested that the use of extrinsic reinforcers be limited. Only those students who are not sufficiently motivated intrinsically to participate should be given external reinforcement.

CONCLUSION

What can the teacher do?

The research provides many suggestions which the classroom teacher can use to enhance student motivation; however, the teacher's primary focus needs to be on presenting a positive figure in the environment. S/he can provide positive learning attitudes, enthusiasm for subject matter, supportive feedback, encouragement for effort, learning experiences that are successful, an accepting atmosphere, and a model of productive thinking for students to imitate. It is the responsibility of the concerned teacher to provide this kind of environment for students so that they have adequate support and encouragement as they learn to seek knowledge independently.

Should rewards be used?

The research suggests that external reinforcement systems should be used with care. Students possessing high levels of intrinsic motivation were shown to function at their best without the use of any additional reward. For those students, however, who need encouragement to try new activities or who have encountered repeated failures, extrinsic rewards may be beneficial. The teacher is advised to know his/her students well and to make careful evaluations of the learning conditions within the classroom before

implementing any external reinforcement strategy.

Verbal rewards in the form of praise may generally be used to successfully reinforce learning behaviors, but there are students for whom praise may not be a positive force.

RECOMMENDATIONS

It is recommended that:

1. The classroom teacher take responsibility for providing an atmosphere conducive to motivation for all students.
2. All students be given opportunities for successful learning experiences.
3. All students be allowed to help determine their educational goals.
4. External reinforcement systems be used only when necessary to engage student involvement and be selected and monitored carefully.

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